

## A new species of *Urocarpus* (Rutaceae) from Western Australia

By Paul G. Wilson

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### Abstract

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A new species of *Urocarpus* Drumm. ex Harv. (Rutaceae) is described from near Bindoon, Western Australia. It differs from *U. grandiflorus* (Hook.) P. G. Wilson in having narrowly oblong leaves and smaller flowers which are white in colour. In carpel number it provides a link between *Urocarpus* s.str. and *Asterolasia* F. Muell., supporting the suggestion that the latter genus should not be maintained.

A new species of *Urocarpus* is described in order to validate its inclusion in the projected Flora of the Perth Region. It was, until recently known from only three collections, all received since my treatment of the genus in 1972, and all referred incorrectly to *U. pallidus* (Benth.) P. G. Wilson.

### *Urocarpus niveus* P. G. Wilson, sp. nov. (Fig. 1)

*Frutex* dense ramosus ad 0·5 m altus. *Folia* breviter petiolata; lamina anguste oblonga ad oblonga, 6–12 x 1·5–4 mm. *Petala* alba, facie exteriore cum trichomatibus solidus minute echinatis ornata. *Stamina* 16–20.

*Type:* P. G. Wilson 11704, ca. 20 km N of Bindoon (ca. 31°12'S, 116°10'E) Western Australia, 19 Sept. 1979 (holo PERTH; iso CANB, K, NSW).

Weak, densely branched sub-shrub to 0·5 m high. *Branches* slender, sparsely stellate, pubescent. *Leaves* shortly petiolate; lamina narrowly oblong to oblong, 6–12 x 1·5–4 mm, somewhat coriaceous (chartaceous when in shade), entire, flat or with recurved margins, sparsely stellate-pubescent, becoming scabridulous above with age. *Umbels* when terminal 3–6 flowered (lateral umbels 1-flowered on very short axillary shoots), surrounded by 2–3 leaves and a few petaloid bracts 3–4 mm long. *Sepals* inconspicuous, broadly triangular, ca. 0·3 mm long. *Petals* induplicate-valvate in bud, spreading, white, elliptic, 8–10 mm long, glabrous within, covered outside with solid, sub-spherical, shortly echinate trichomes which, in the bud, form an armour-like covering. *Stamens* 16–20, somewhat shorter than and deciduous before the petals; filaments slender, glabrous; anthers yellow, oblong, 1·5 mm long, with a small terminal gland. *Disc* very small and inconspicuous. *Ovary* ellipsoidal, 2 mm long including the short solid carpel apices, stellate-hairy; carpels 3 or 4, free but united by the slender style; stigma with 3 or 4 short stout recurved lobes. *Fruiting cocci* ca. 5 mm long each with a slender beak ca. 3 mm long which becomes divaricate with age. *Seeds* oblong, 3 mm long; testa smooth, dull and dark brown; placental endocarp thin, deciduous from seed.

*Distribution:* Western Australia. Southwest Botanical Province: near Bindoon, ca 110 km N of Perth.

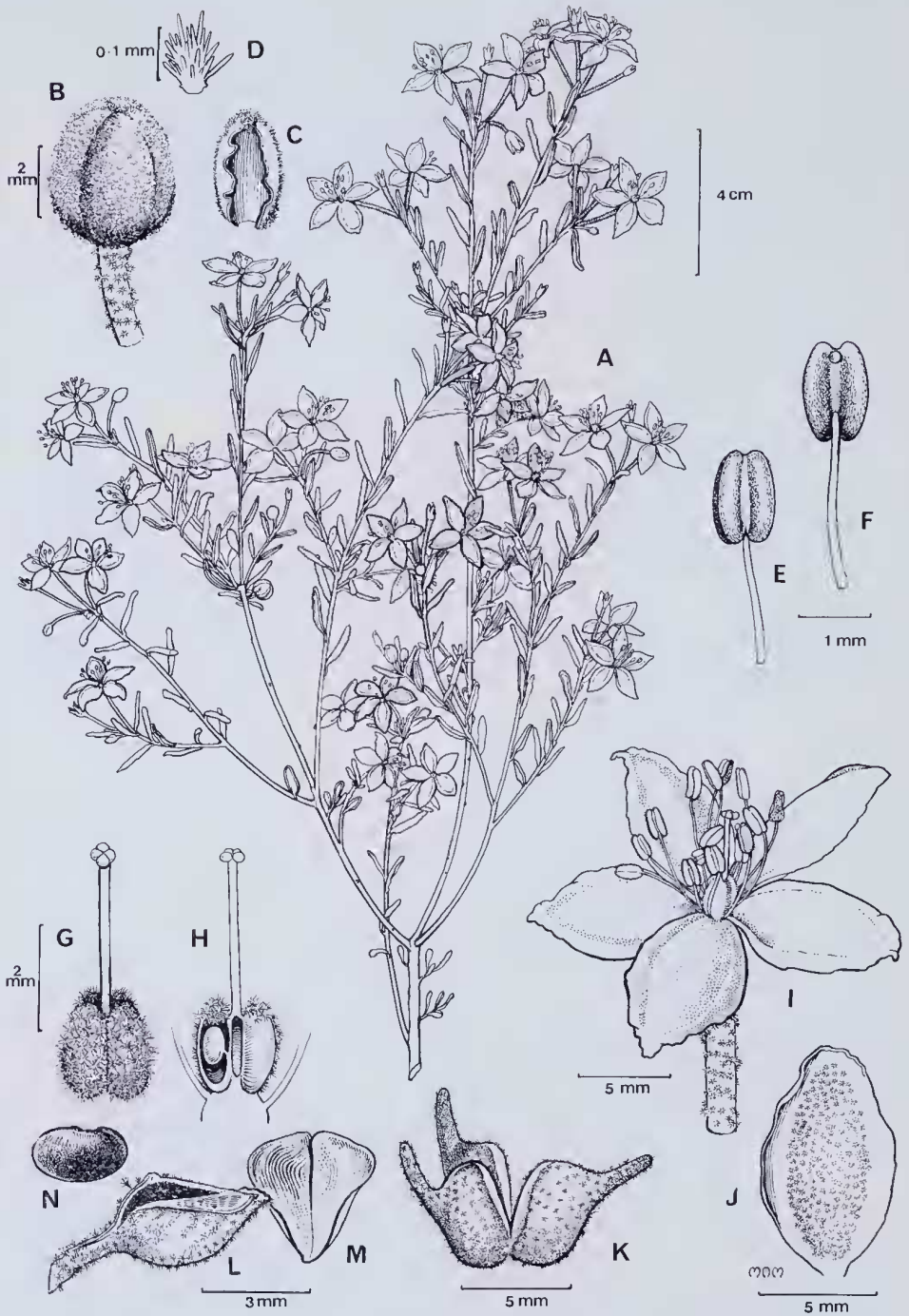


Figure 1. *Urocarpus niveus* P. G. Wilson. A—habit. B—flower bud. C—induplicate petal. D—stellate hair from petal. E—stamen (adaxial view). F—stamen (abaxial view). G—gynoecium. H—L.S. gynoecium. I—flower. J—petal (abaxial view). K—fruit. L—dehiscent coccus. M—endocarp. N—seed. From P. G. Wilson 11704.

*Western Australia*: Near Bindoon, Great Northern Highway, Sep. 1963, *E. Duffield* (PERTH); Near Bindoon, 12 Sep. 1960, *C. A. Gardner* (PERTH); South of Moore River, Aug. 1966, *C. A. Gardner* (PERTH).

*Habitat*: *Eucalyptus calophylla* (Marri) woodland on clay with lateritic gravel.

*Conservation Status* (Specht 1974): Endangered.

*Urocarpus niveus* is superficially like *U. pallidus* (Benth.) P. G. Wilson since both species have white flowers. In *U. pallidus*, however, the hairs on the petals are stellate (not of a solid sub-spherical globule) and the leaves are broadly elliptic (not oblong). *Urocarpus niveus* is most closely related to *U. grandiflorus* (Hook.) P. G. Wilson; the latter species has similar petal hairs but differs in flower size and colour (larger, pink-mauve petals), and in leaf shape (ovate to elliptic), while it is restricted in its distribution to a small area near York. On plants growing in the open the leaves of *U. niveus* are somewhat coriaceous and their margins recurved; in the shade, however, the leaves are chartaceous and flat.

The genus *Urocarpus* Drumm. et Harvey (early 1855) I consider to include the genera *Asterolasia* F. Muell. (late 1855) and *Pleurandropsis* Baill. (1872) (see Wilson 1971). It may be distinguished from other members of the tribe *Boronieae* by the following association of characters:

- (1) Flowers in umbels and maturing in succession.
- (2) Virtual absence of disc.
- (3) Inconspicuous calyx.
- (4) Induplicate-valvate petals.

Bentham (1863) divided the genus (as *Asterolasia*) into two sections; the first, containing those species with five carpels, he called sect. *Euasterolasia* (= *Phebalium* sect. *Correoides* Endl., 1840), and the second, those with two to three carpels, he called sect. *Urocarpus* (Harv.) Benth. The species belonging to the first section are found in Victoria and New South Wales while those of the second occur in South Australia and Western Australia. The number of carpels varies in the Western Australian species; *U. phebaloides* Harv. has two carpels, *U. pallidus* (Benth.) P. G. Wilson, *U. grandiflorus*, and *U. squamuligerus* (Hook.) P. G. Wilson have either two or three carpels while the newly described species, *U. niveus*, has either three or four carpels. Since there is a transition between the 2- and 5- carpellary condition, a generic or infrageneric separation based on this character does not appear to be warranted. A transfer to the genus *Urocarpus*, of those species of *Asterolasia* found in New South Wales and Victoria, has still to be made. This step, however, should be taken only after the taxonomic complexities of that group have been cleared up.

The Conservation Status of "Endangered" has been given to this species since it is now only known in nature from a few wayside plants, although it is possible that other populations may be present in the remnants of forest near Bindoon.

### Acknowledgement

The illustration of a plant from the type collection was prepared by Margaret A. Menadue.

### References

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